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ABSTRACT

The generalizability of Person-Relative-to-Event (PrE) theory, originally applied to disaster-related situations, is investigated in a non-disaster simulation. The PrE theory of coping with threat emphasizes the relationship between level of appraised threat relative to person resources and personal responsibility. This theory has previously been used to investigate the impact of negative threat appeals on preparedness behavior regarding both earthquakes and tornadoes. PrE theory predicts differences in coping behavior based on level of threat under various conditions of personal responsibility. The present investigation was conducted to verify predictions made by PrE theory when applied to a non-disaster topic (academic assessment). College students (N=65) responded to a questionnaire regarding a verbal assessment examination. Procedures, analysis by MANOVA, and results are described. Support for the theory in both intentions as well as actual preparedness behavior is indicated by results. (Author/EMK)

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PrE (PERSON-RELATIVE-TO-EVENT) THEORY OF COPING WITH THREAT

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ABSTRACT

PrE (Person-Relative-to-Event) theory of coping with threat emphasizes the relationship between level of appraised threat relative to person resources, and personal responsibility (Duval & Mulilis, 1997; Mulilis & Duval, 1995, 1996, 1997). The theory has previously been used to investigate the impact of negative threat appeals on preparedness behavior regarding both earthquakes (Duval & Mulilis, 1997; Mulilis & Duval, 1995) and tornados (Mulilis & Duval, 1997). The present investigation was conducted to verify predictions made by PrE theory to a non-disaster topic (i.e., academic assessment). Results of this study indicated support for the theory in both intentions as well as actual preparedness behavior.

INTRODUCTION

PrE theory is based in a theoretical formulation of coping (Lazarus, 1966; Lazarus & Folkman, 1984) as applied to negative threat appeals (Duval & Mulilis, 1997; Mulilis & Duval, 1995, 1996, 1997). Given a high level of personal responsibility, the theory predicts that regardless of the absolute levels (e.g., high, moderate, low) of person resources and magnitude of threat, the PrE model predicts that a negative threat appeal resulting in appraisal of person resources as being sufficient relative to degree of threat posed by the external event (i.e., P/E > 1), will generate more problem-focused coping than in the case where the appeal causes personal resources to be appraised as insufficient with regard to magnitude of threat (i.e., P/E < 1). Furthermore, PrE theory predicts that low levels of personal responsibility will not lead to such processes. The present investigation was conducted to demonstrate the generalizability of PrE theory, focusing on a persuasive communication that assessed academic verbal skills..

Overview

Participants were randomly assigned to conditions of a combination within- and between-subjects design. The between subjects portion of the design consisted of a 2 (levels of person relative to event) x 2 (levels of personal responsibility) factorial component. Three sequential measurements of the manipulation checks and behavioral intentions constituted the within-subjects component.

METHOD

Participants

A total of 65 students (31 males and 34 females) enrolled in an introductory psychology course at the Pennsylvania State University volunteered to participate in the present study to obtain course credit. Guidelines concerning the ethical treatment of participants provided by the American Psychological Association were strictly adhered to in conducting the research.

Procedure

Individual participants completed a questionnaire consisting of a cover sheet, eight demographic questions, a neutral task (consisting of six questions regarding academic standing and achievements), manipulation essays, a behavioral intention measure, and 11 questions designed to assess the effectiveness of the manipulations.

The essays manipulating person-relative-to-event paralleled similar essays designed by Mulilis and Duval (Duval & Mulilis, 1997; Mulilis & Duval, 1995, 1996, 1997) and were designed to manipulate participants' levels of appraised resources available to prepare for a standardized verbal assessment examination (i.e., the person essay) relative to levels of appraised threatening consequences of a standardized verbal assessment examination (i.e., the event essay). The essays manipulating responsibility depicted that either participants were personally responsible for preparing for the examination or that the

university was more responsible for seeing to it that participants were prepare.

To assess students' intentions to become more prepared for a verbal assessment examination, participants were asked to agree/disagree with the statement, "I intend to take immediate, specific action to prepare for the possible occurrence of a verbal assessment examination" by circling a number from 1 (disagree strongly) to 6 (agree strongly) on the scale below. In order to investigate the within-subjects component of the design, the above items regarding the manipulation checks and behavioral intentions were asked three different times in the questionnaire, (1) at time 1, after the neutral task, (2) at time 2, after the PrE manipulation, and (3) at time 3, after the responsibility manipulation.

Finally, the last page of the questionnaire contained explicit, detailed procedures for obtaining scheduling information about "practice" verbal assessment examinations which participants could keep if they choose. Thus, the behavioral measure of preparation was operationally defined as the last page being missing from their questionnaire.

RESULTS

A MANOVA performed on participants' responses to the question designed to assess the effectiveness of the person-relative-to-event manipulation revealed a significant between-subjects main effect due to this manipulation, $F_b(1,61)=25.93$, $p<0.001$. Participants' responses increased in the expected manner from

person less than event to person greater than event following the PrE manipulation. This between-subjects main effect was qualified by a significant within-subjects interaction of person-relative-to-event by time on the PrE manipulation, F.(2,122)=194.01, p<.001. In the person less than event condition, participants' responses decreased from before the PrE manipulation at time 1 to after the PrE manipulation at time 2 and time 3 (M's=4.72, 3.62, and 3.56, respectively). On the other hand, in the person greater than event condition, participants' mean responses increased from before the PrE manipulation at time 1 to after the PrE manipulation at time 2 and time 3 (M's=4.39, 5.58, and 5.85, respectively).

In order to explore the nature of participants' responses to the responsibility manipulation check, separate MANOVAs were conducted on responses in the low and high responsibility conditions. Results of the MANOVA conducted on the low responsibility manipulation did not reveal any between-subjects or within-subjects main effects or interactions, F's=ns. However, results of the MANOVA conducted on responses to the high responsibility manipulation revealed a significant within-subjects main effect of time on this manipulation, with participants' responses increasing in the expected manner, F(2,70)=3.63, p=.032. Participants' responses in this condition increased in the expected manner from before the responsibility manipulation at time 1 and time 2 to after the responsibility manipulation at time 3 (M's=4.84, 4.86, and 5.38, respectively).

A MANOVA performed on responses to the question designed to assess participants' intentions to become more prepared for a verbal assessment examination revealed a within-subjects interaction of PrE by time on participants' behavioral intentions that approximated conventional levels of significance, $F.(2,122)=2.81$, $p=.064$. Participants' behavioral intentions increased in the expected manner from time 1 to time 2 to time 3 (M's=3.38, 3.48, and 3.72, respectively). To explore the nature of this interaction further, separate MANOVAs were conducted on participants' behavioral intentions in the person less than event and person greater than event conditions. Results of the MANOVA conducted on participants' responses in the person less than event condition did not reveal any significant between-subjects or within-subjects main effects or interactions, F's=ns. On the other hand, results of the MANOVA conducted on participants' responses in the person greater than event condition revealed a significant within-subjects main effect of time on participants' behavioral intentions, $F(2,62)=5.43$, $p=.007$. The pattern of means for participants' behavioral intentions in both the person less than event and person greater than event conditions is shown in Table 1. As indicated in Table 1, while participants' responses in the person less than event condition first decreased from time 1 to time 2 (M's=3.37 and 3.34, respectively) then increased from time 2 to time 3 (M's=3.34 and 3.37, respectively), none of these differences were significant, t's=ns. On the other hand, participants' behavioral intentions in the person greater than

event condition increased continuously from time 1 to time 2 to time 3 (M's=3.39, 3.61, and 4.06, respectively). While changes in participants' responses from time 1 to time 2 (M's=3.39 and 3.61, respectively) were not significantly different, changes in responses from time 2 to time 3 (M's=3.61 and 4.06, respectively) and from time 1 to time 3 (M's=3.39 and 4.06, respectively) were both significantly different, t(32)=0.98, ns, t(32)=3.92, p<.001, and t(32)=2.92, p=.006, respectively.

In addition, the MANOVA conducted on participants' responses to the question on behavioral intentions revealed a significant within-subjects interaction of responsibility by time, F(2,122)=3.04, p=.050. As before, in order to explore the nature of this interaction further, separate MANOVAs were conducted on participants' behavioral intentions in the low responsibility and high responsibility conditions.

Results of the MANOVA performed on participants' responses in the low responsibility condition did not reveal any significant between-subjects or within-subjects main effects or interactions, F's=ns. However, results of the MANOVA conducted on responses in the high responsibility condition revealed a significant within-subjects main effect of time on participants' behavioral intentions, F(2,70)=4.08, p=.021. The pattern of means for participants' responses in both the low and high responsibility conditions is shown in Table 2. As indicated in Table 2, it was only in the high responsibility condition that participants' behavioral intentions increased continuously from time 1 to time

2 to time 3 (M's=3.40, 3.76, and 4.00, respectively). While differences in participants' responses between time 1 to time 2 (M's=3.40 and 3.76, respectively) were not significant, differences in responses between time 2 and time 3 (M's=3.76 and 4.00, respectively) and between time 1 and time 3 (M's=3.40 and 4.00, respectively) were both significant, $t(36)=1.49$, ns, $t(36)=2.31$, $p=.027$, and $t(36)=2.38$, $p=.023$, respectively.

A 2 (person less than/person greater than) x 2 (low/high responsibility) ANOVA was conducted on participants' responses to the behavioral outcome of tearing off the last page of the questionnaire. The results of this ANOVA indicated a main effect of the PrE manipulation on behavior that approximated statistical significance, $F(1,61)=3.33$, $p=.073$. As expected, participants behavioral responses in the person greater than event condition were greater than in the person less than event condition (M's=1.42 and 1.22, respectively).

This main effect was qualified by a significant PrE by responsibility interaction on participants' behavior, $F(1,61)=4.61$, $p=.036$. The results of this interaction are shown in Table 3. As indicated in Table 3, the nature of this interaction was identical to previous results obtained by Mulilis and Duval (1995, 1997) investigating the effect of the PrE model on behavioral preparedness responses to both earthquakes (Mulilis & Duval, 1995) and tornados (Mulilis & Duval, 1997). That is, in the present study participants in the high responsibility condition indicated significantly greater behavioral responses

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when person was greater than event than when person was less than event (*M*'s=1.58 and 1.17, respectively), *t*(35)=2.78, *p*=.002. These results were in contrast to the low responsibility condition in which participants' behavioral responses between the person less than event and person greater than event were not significantly different (*M*'s=1.29 and 1.21, respectively), *t*(26)=.42, *ns*.

DISCUSSION

The purpose of the present investigation was to demonstrate the generalizability of the model with respect to the topic of study. Results of the present study were generally favorable with regard to the viability of PrE theory, and indicated that change in behavior conformed to predictions derived from the PrE model to a greater extent when responsibility was high rather than low, and that the complex pattern of results of behavioral change for both high and low responsibility replicated results obtained for earthquake (Mulilis & Duval, 1995) and tornado (Mulilis & Duval, 1997) preparedness behavior. In particular, as level of appraised person resources increased relative to level of threat of a verbal assessment examination, preparedness behavior increased for individuals who felt highly responsible for preparing for the occurrence of such an examination. However, when personal responsibility was low, level of appraised resources relative to level of appraised threat had no impact on participants' behavior.

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Table 1
Cell Means for the PrE by Time Interaction on Behavioral Intentions to Become More Prepared for a Verbal Assessment Examination

	Person-Relative-to-Event			
	P<E		P>E	
Time	M	N	M	N
Time 1	3.37	32	3.39	33
Time 2	3.34	32	3.61	33
Time 3	3.37	32	4.06	33

Note. As means increase, change in levels of intentions to prepare for a verbal assessment examination increases.

Table 2
Cell Means for the Responsibility by Time Interaction on Behavioral Intentions to Become More Prepared for a Verbal Assessment Examination

	Responsibility			
	Low		High	
Time	M	N	M	N
Time 1	3.36	28	3.40	37
Time 2	3.11	28	3.76	37
Time 3	3.36	28	4.00	37

Note. As means increase, change in levels of intentions to prepare for a verbal assessment examination increases.

Table 3
Cell Means for Behavioral Responses to Become More Prepared for a Verbal Assessment Examination

	Responsibility			
	Low Responsibility		High Responsibility	
Condition	M	N	M	N
Person Less than Event	1.29	14	1.17	18
Person Greater than Event	1.21	14	1.58	19

Note. As means increase, change in levels of preparedness behavior increases.